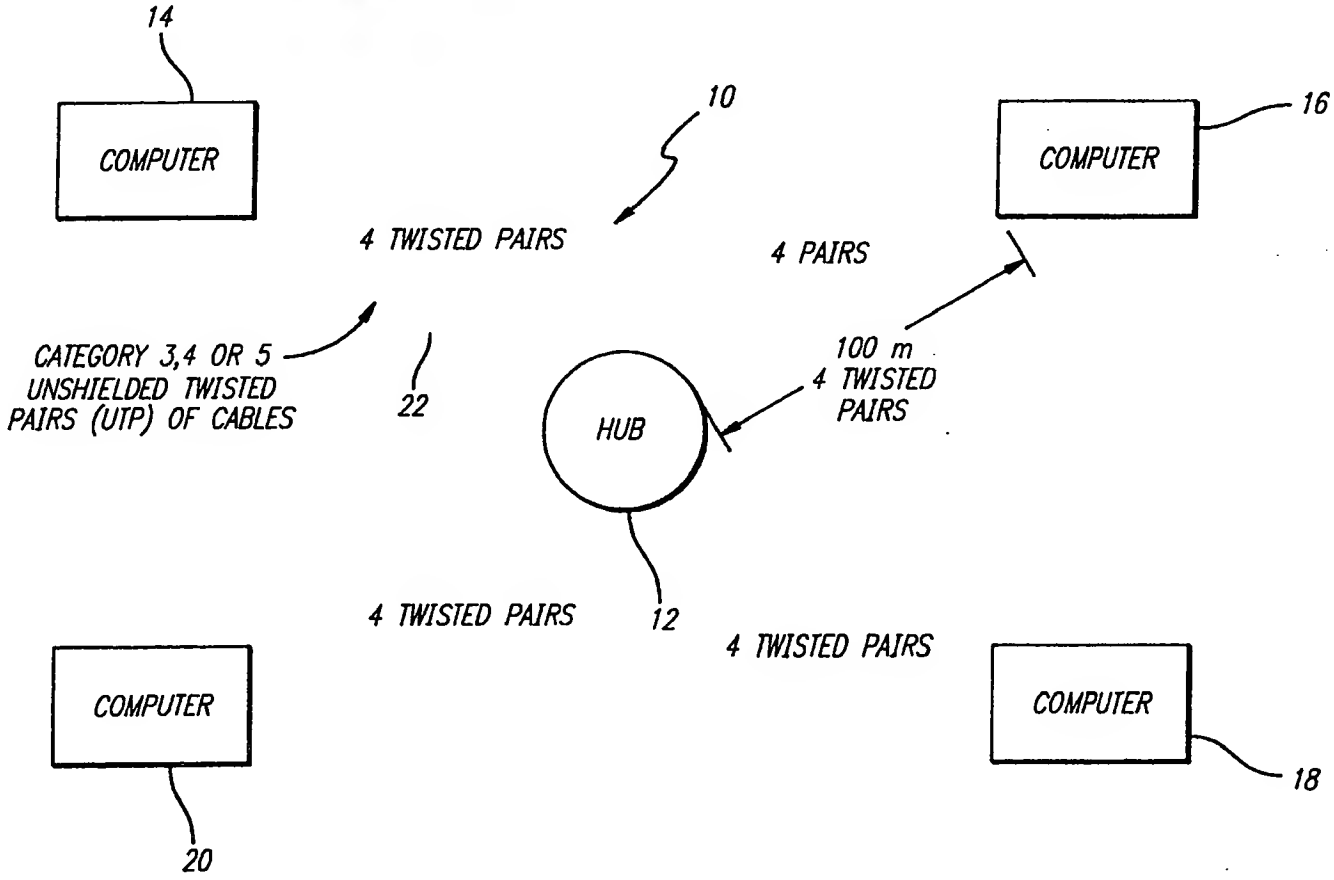
APPROVED BY DRAFTSMAN
O.G. FIG. 1
CLASS 370 SUBCLASS 401

RE37826

FIG. 1 PRIOR ART

100 Mb/S ETHERNET LOCAL AREA NETWORK (LAN)



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CLASS
SUBCLASS

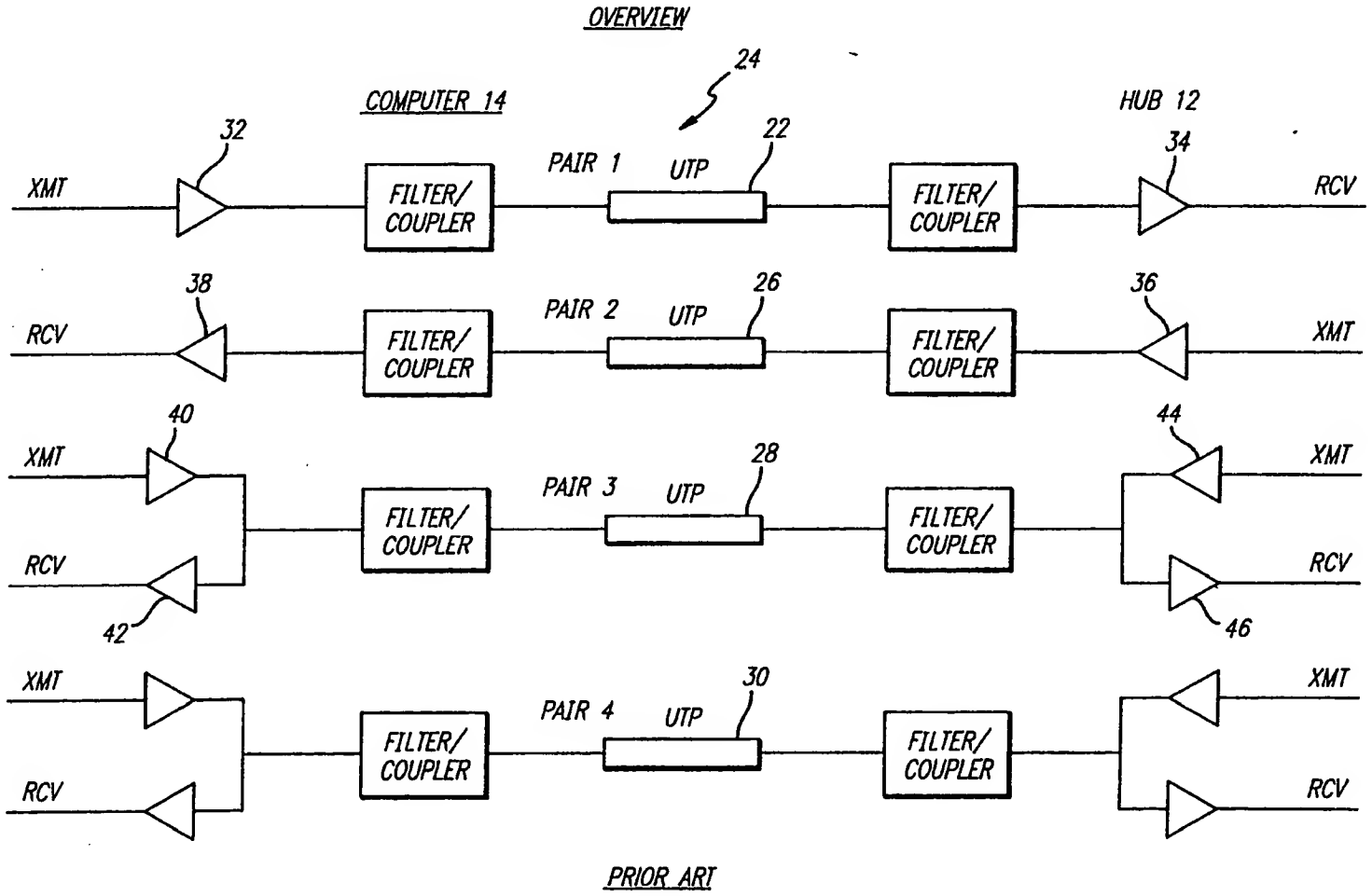

FIG. 2

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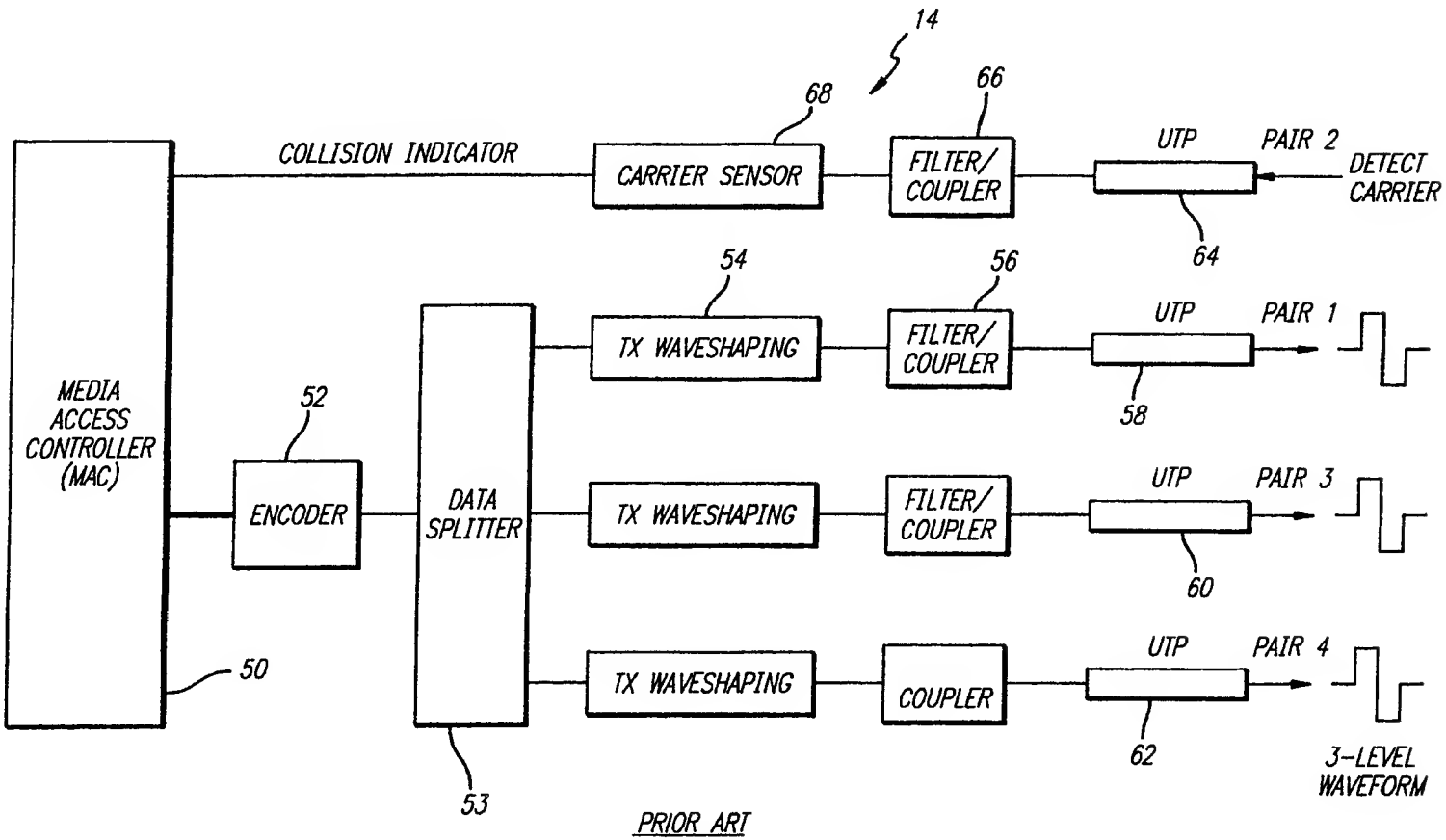
O.G. FIG.
CLASS SUBCLASS

TRANSMITTER BLOCK DIAGRAM FOR COMPUTER 14



PRIOR ART

FIG. 3

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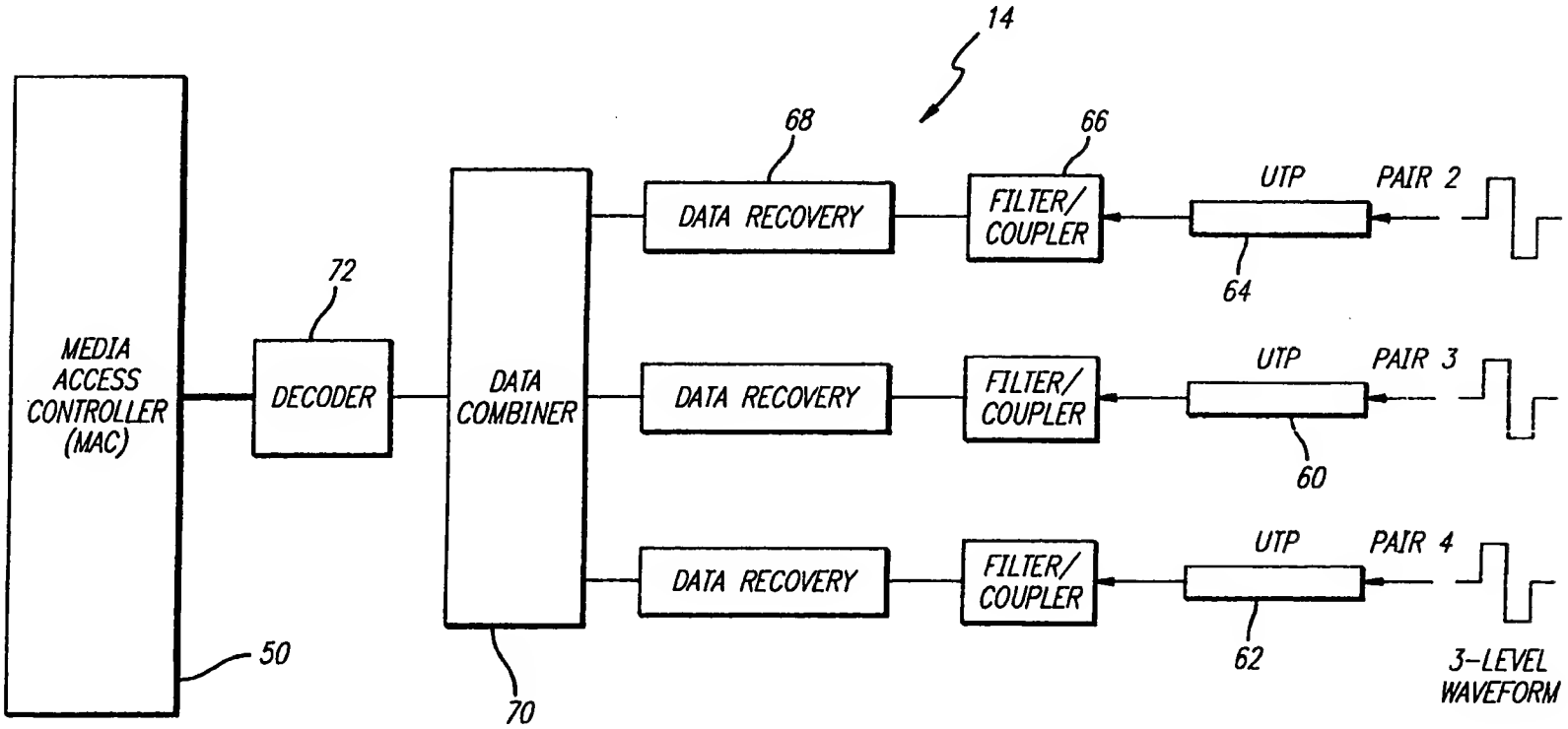
CLASS SUBCLASS

RECEIVER BLOCK DIAGRAM FOR COMPUTER 14



PRIOR ART

FIG. 4

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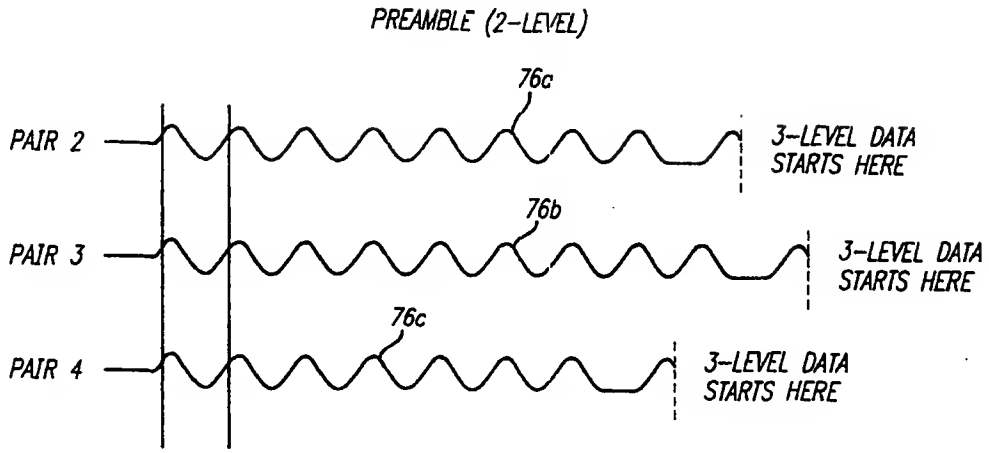
FIG. 5



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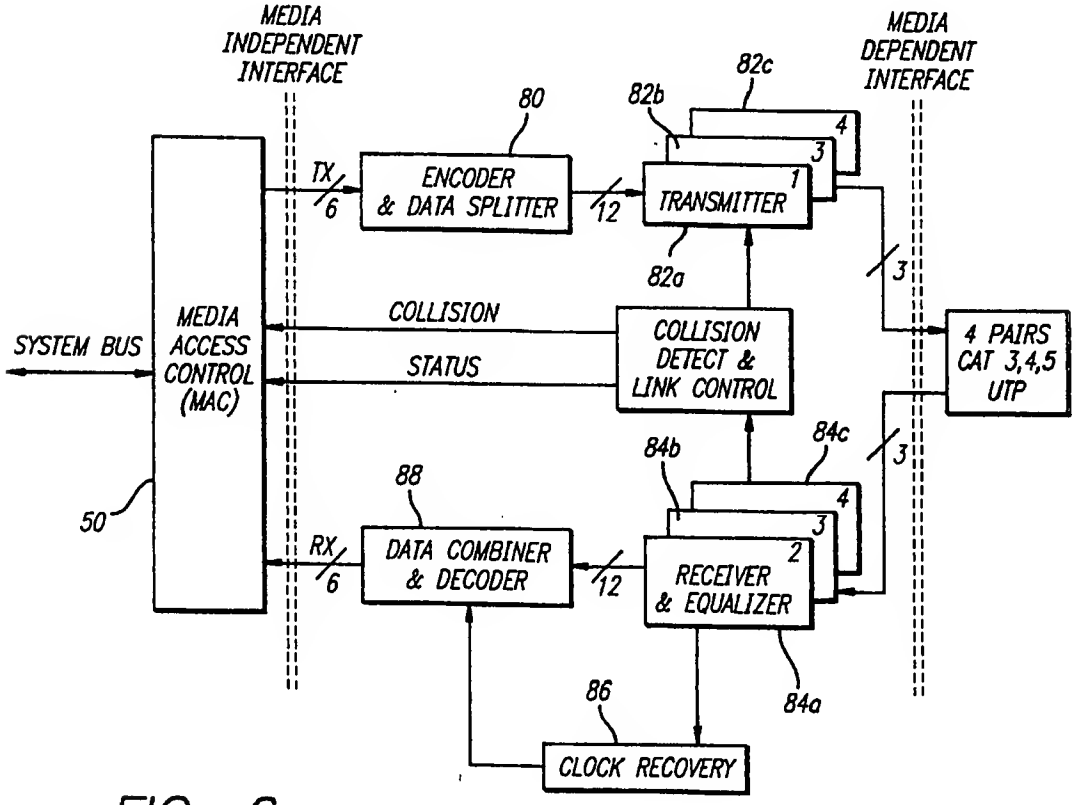

FIG. 6

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O.G. FIG.
CLASS
SUBCLASS

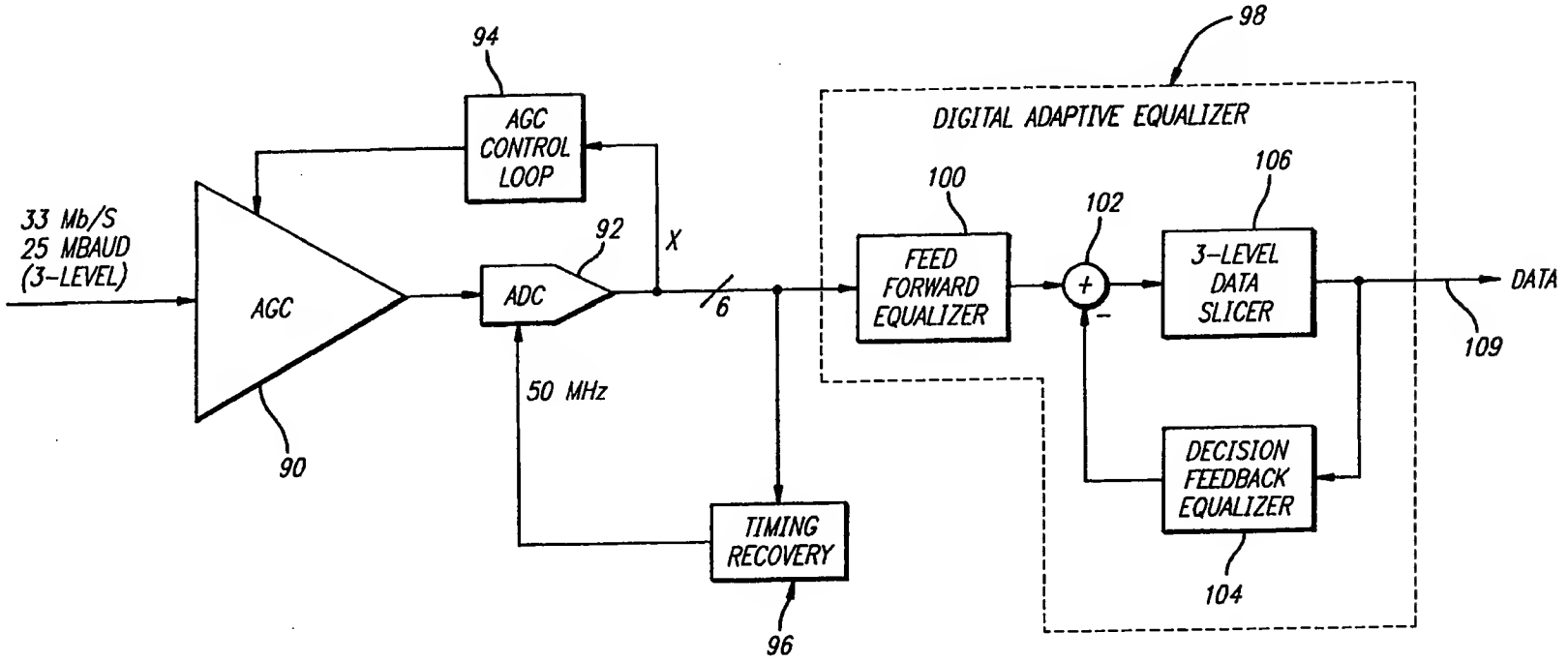

FIG. 7

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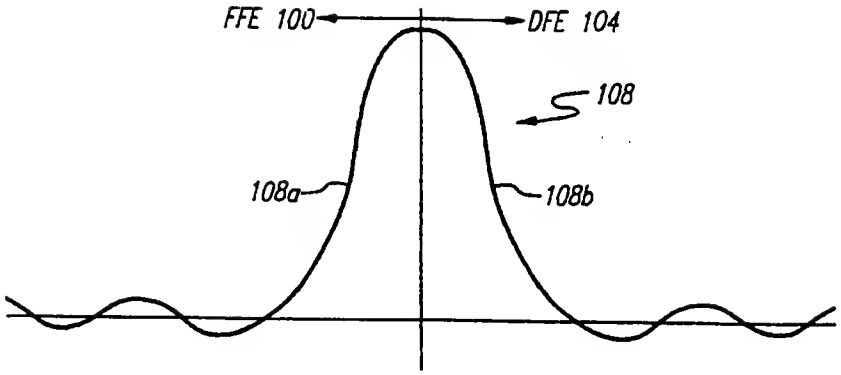
APPROVED BY DRAFTSMAN | O.G. FIG. | CLASS | SUBCLASS

FIG. 8



HIGH GAIN PHASE DETECTION
"TRANSITION TRACKING LOOP"

FIG. 12a

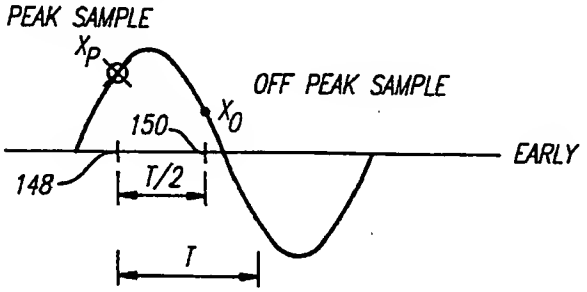


FIG. 12b

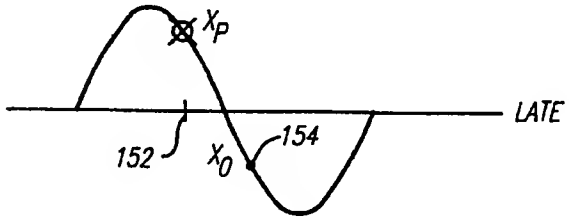
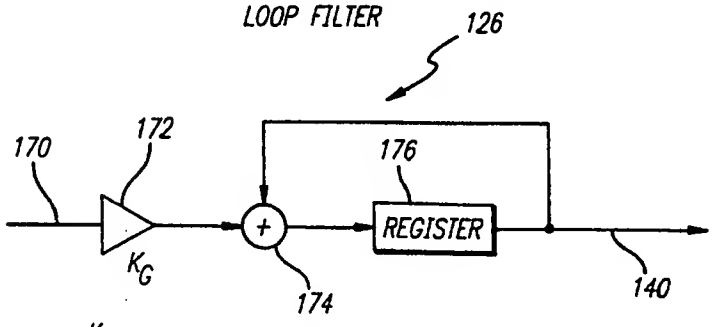


FIG. 15



K_G = CONSTANT

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O.G. FIG.
CLASS
SUBCLASS

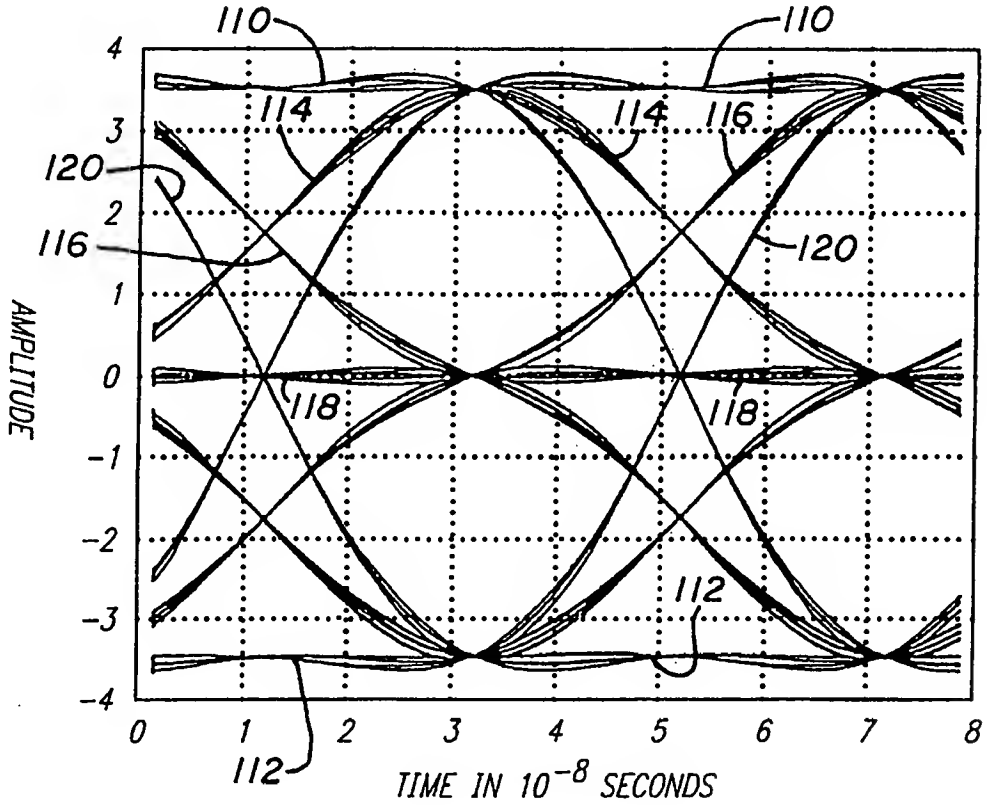

FIG. 9

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O.G. FIG.
CLASS
SUBCLASS

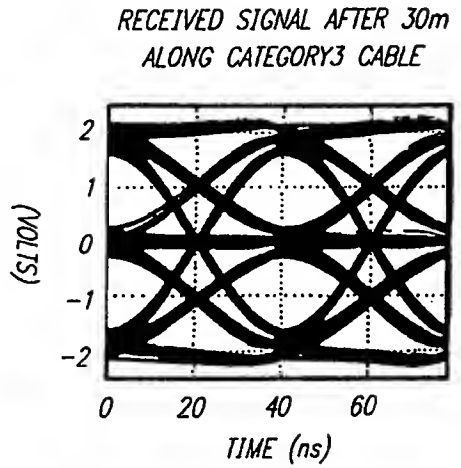

FIG. 10a

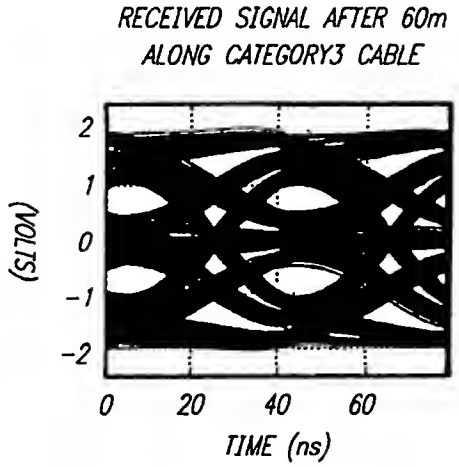

FIG. 10b

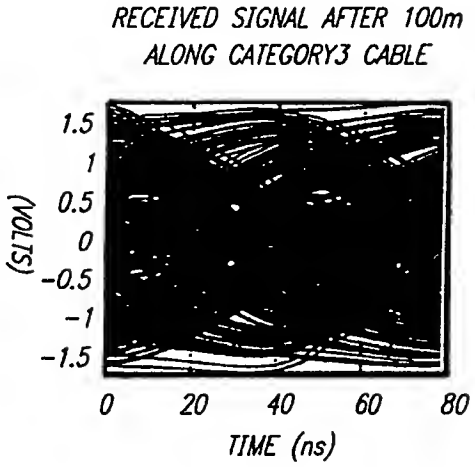

FIG. 10c

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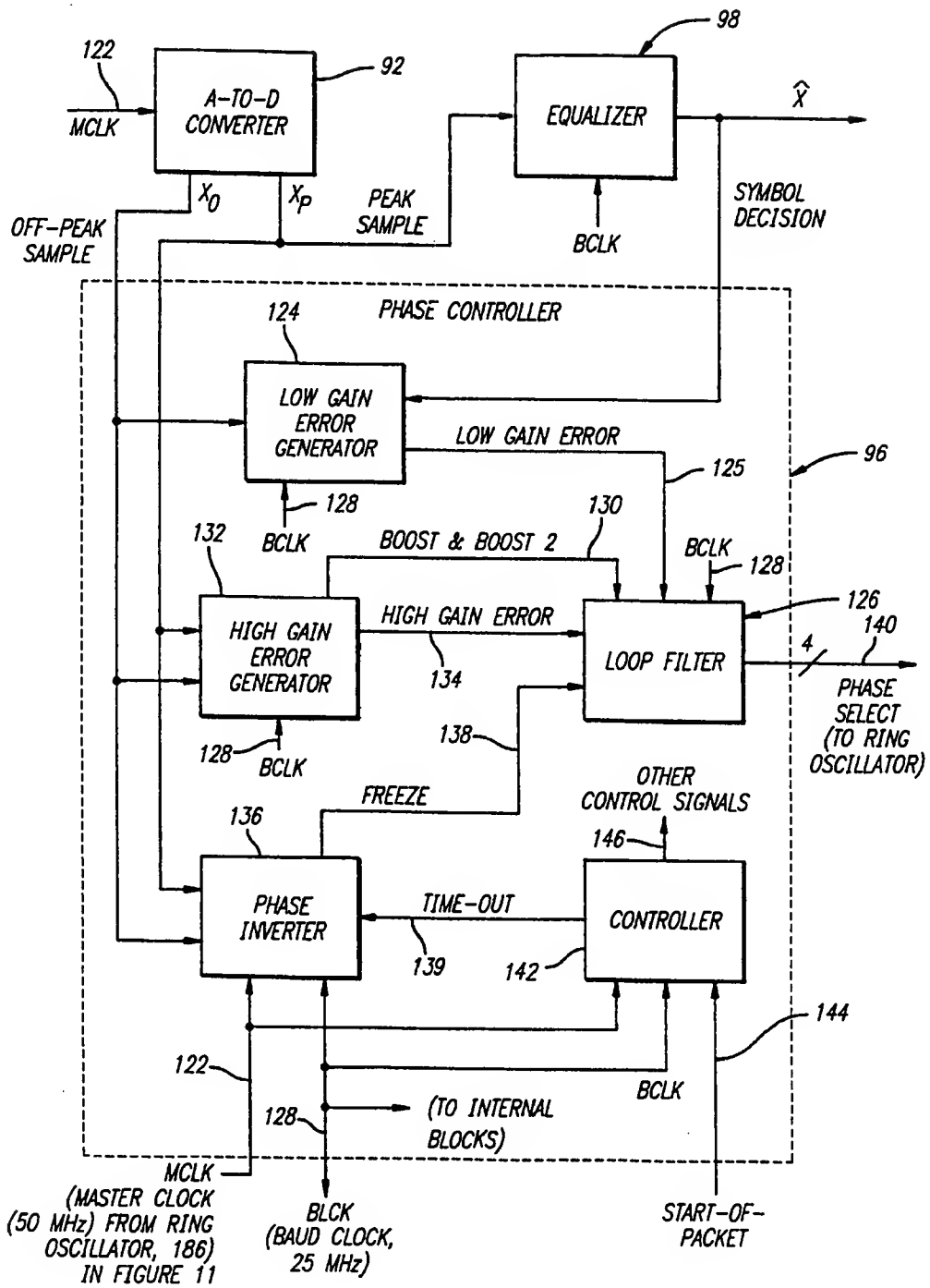
APPROVED BY DRAFTSMAN | O.G. FIG. | CLASS | SUBCLASS

FIG. 11



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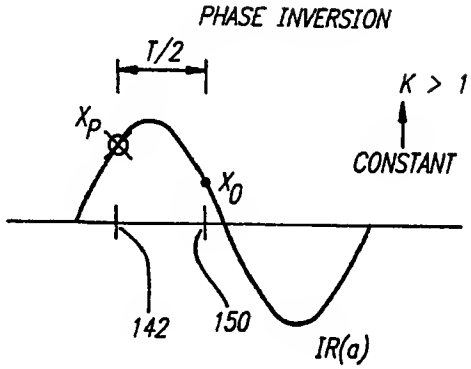
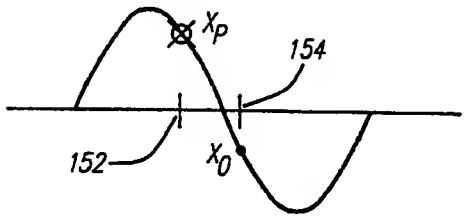


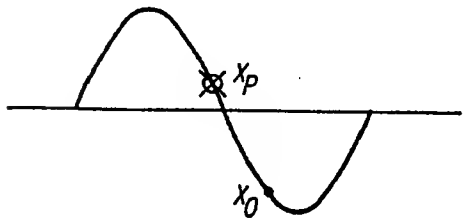
$\|X_P\| > K\|X_0\|$	NO	PHASE INVERSION of 90°

FIG. 13a



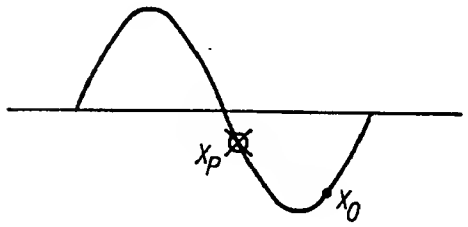
$\|X_P\| > K\|X_0\|$	NO

FIG. 13b



$\|X_P\| < K\|X_0\|$	YES

FIG. 13c



$\|X_P\| < K\|X_0\|$	YES

FIG. 13d

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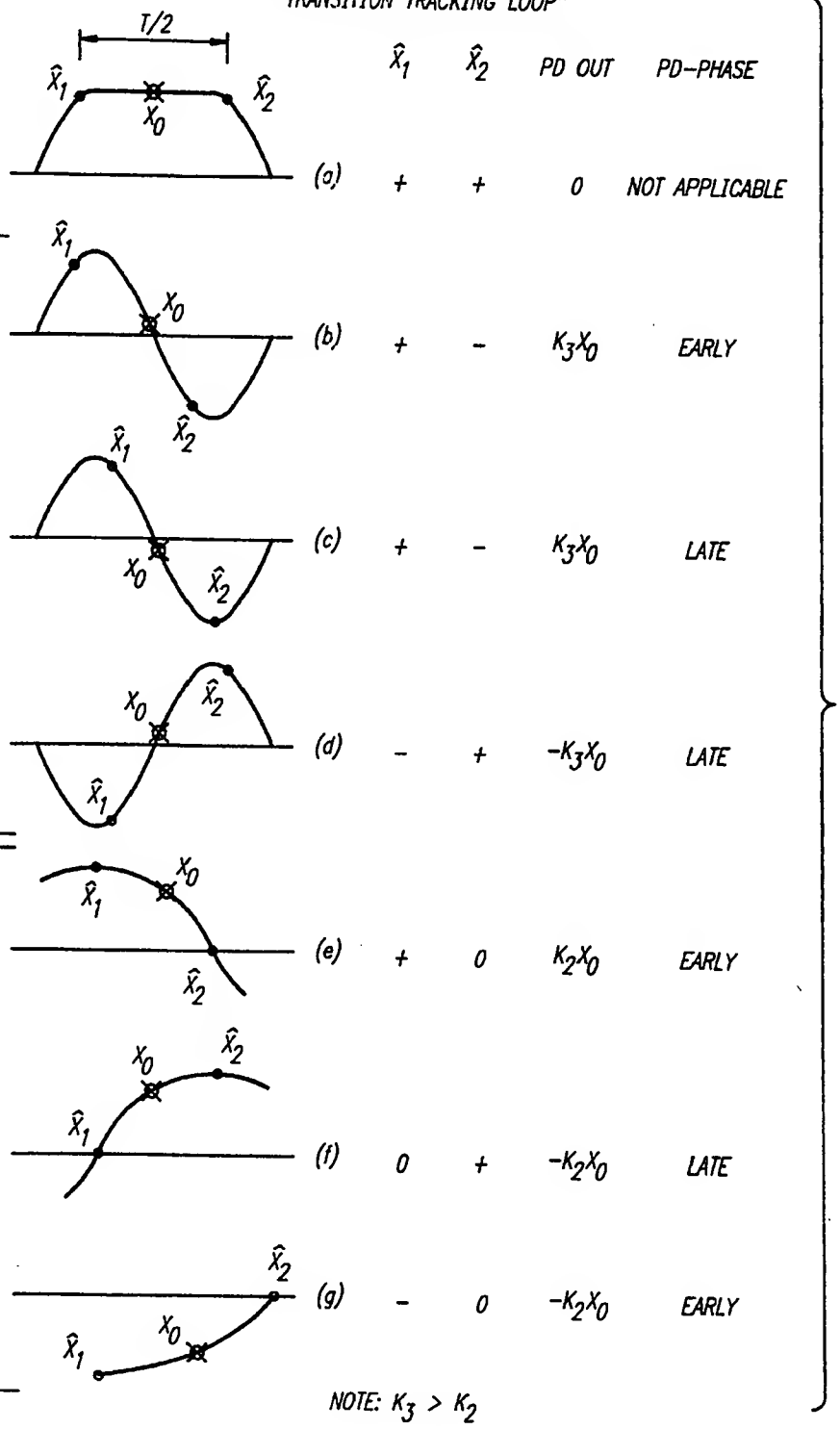
APPROVED BY DRAFTSMAN | O.G. FIG. | CLASS | SUBCLASS

FIG. 14

LOW GAIN PHASE DETECTION
"TRANSITION TRACKING LOOP"



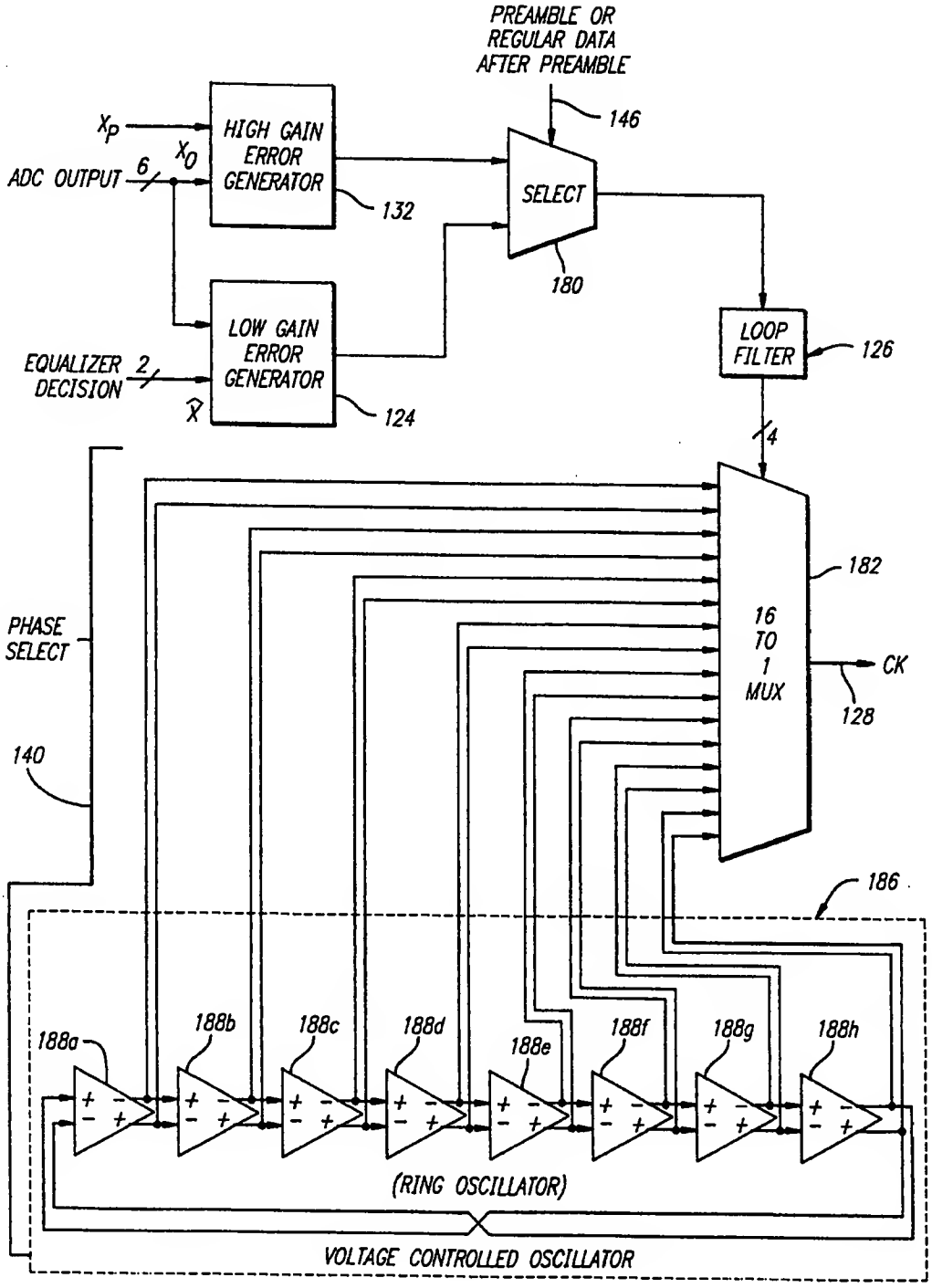
	$\hat{X}_1$	$\hat{X}_2$	PD OUT	PD-PHASE
(a)	+	+	0	NOT APPLICABLE
(b)	+	−	K_3X_0	EARLY
(c)	+	−	K_3X_0	LATE
(d)	−	+	$-K_3X_0$	LATE
(e)	+	0	K_2X_0	EARLY
(f)	0	+	$-K_2X_0$	LATE
(g)	−	0	$-K_2X_0$	EARLY

NOTE: $K_3 > K_2$

0 0 2 5 2 5 5 4 : 0 2 2 4 6 3 0

APPROVED BY DRAFTSMAN	O.G. FIG.	
	CLASS	SUBCLASS

FIG. 16



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